

WHAT IS CLAIMED IS:

1. A method of utilizing a written universal resource locator (URL) to communicate with the internet, comprising the steps of:
 - 5 using a camera unit to acquire a raw visual light image that contains the written URL,
 - converting the raw visual light image to an electronic image,
 - locating glyphs of at least one particular standardized set of URL characters in the electronic image,
 - 10 extracting an extractable URL from the electronic image,
 - sending the extractable URL in a request signal to a web server in order to access an internet site,
 - processing a reply from the web server,
 - presenting the internet site.
- 15 2. The method of claim 1, further comprising the steps of:
 - approximating an angle between a plane of a glyph of a certain character and a plane perpendicular to a line of sight from the camera; and
 - compensating for said angle before attempting extraction of remaining
 - 20 parts of the extractable URL.
3. The method of claim 1, wherein the camera is a video or still camera for capturing arbitrary scenes.
- 25 4. The method of claim 2, wherein the at least one particular set of characters comprises the character string www, and wherein the certain character is the letter "o."

5. The method of claim 1, wherein the step of extracting the URL is performed at least partly by a URL extraction means that receives the electronic image via a telecommunications network.
- 5 6. The method of claim 1, further comprising the step of manually amending the extractable URL if the extractable URL is different from the written URL.
7. The method of claim 1, further comprising the steps of:
selecting a portion of the electronic image containing the written URL, if the
10 extractable URL is different from the written URL,
extracting a more accurate URL from the portion of the electronic image,
sending the more accurate URL to a corresponding web server,
processing a further reply from the corresponding web server,
displaying a desired web site accessed via the corresponding web server in
15 response to the more accurate URL.
8. The method of claim 1, including an initial step of instructing the camera unit to go to the internet via the raw visual light image, and also including a zooming step before the extracting step so that the camera will automatically zoom in on the
20 extractable URL and thus improve the electronic image.
9. The method of claim 1, further comprising the step of bookmarking the extractable URL by creating a bookmark, and
wherein the request signal to the web server is sent when the bookmark is
25 retrieved.
10. The method of claim 1, further comprising the step of performing the extracting, sending, and processing steps again, if the reply indicated an invalid URL.

11. The method of claim 10, wherein the performing step is performed by a different computer having a greater capacity.

12. The method of claim 1, wherein the extracting step also yields at least one
5 alternate URL that will be tried if the extractable URL turns out to be invalid.

13. The method of claim 7, wherein the step of selecting the portion of the electronic image is performed manually using a stylus or zoom functionality.

10 14. The method of claim 5, wherein the telecommunications network comprises the internet.

15. A system for utilizing a written universal resource locator (URL) to communicate with the internet, comprising:

15 a camera, responsive to a raw visual light image containing the written URL, for providing an electronic image signal indicative of the raw visual light image;

URL extraction means, responsive to the electronic image signal, for finding glyphs of at least one particular standardized set of URL characters in the electronic image, and also for providing a URL request signal indicative of an extractable URL
20 that is extracted from the electronic image signal;

an internet interface, responsive to the URL request signal, for providing a web site signal indicative of an internet site accessed via the internet; and

a display, responsive to the web site signal, for presenting the internet site.

25 16. The system of claim 1, wherein the URL extraction means is also for using a glyph of a certain character to approximate an angle between a plane of said glyph of the certain character and a plane perpendicular to a line of sight from the camera, and compensating for said angle before attempting recognition of remaining parts of the extractable URL.

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17. The system of claim 1, wherein the camera is a video or still camera for capturing arbitrary scenes.

18. The system of claim 16, wherein the at least one particular set of characters
5 comprises the character string www, and wherein the certain character is the letter
“o.”

19. The system of claim 16, wherein the camera and the display are parts of a
mobile device, and at least part of the URL extraction means is communicatively
10 connected to the mobile device via a telecommunications network.

20. The system of claim 16, wherein the camera, at least part of the URL
extraction means, the internet interface, and the display are parts of at least one
mobile device.

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21. The system of claim 16, further comprised of editing means, for manually
amending the extractable URL if it is different from the written URL.

22. The system of claim 16, further comprising an image selection means,
20 responsive to user input, for providing an image portion signal to the URL extraction
means, the image portion signal being indicative of a portion of the electronic image
where the written URL is depicted.

23. A mobile device for utilizing a written universal resource locator (URL) to
25 communicate with the internet, the mobile device comprising:

initiation means for sending an instruction to obtain a raw visual light image
which includes glyphs of at least one particular standardized set of URL characters,
a camera, responsive to the instruction from the initiation means, for receiving
the raw visual light image and for providing an electronic image signal indicative of
30 the raw visual light image;

a display for presenting the web site, the display being responsive to a web site signal indicative of an internet site corresponding to an extractable URL that has been extracted from the raw visual light image; and

an internet interface, for providing the web site signal to the display after
5 communicating with the internet;

wherein the mobile device is for processing the electronic image signal provided by the camera, in order to obtain the web site signal from the internet interface.

10 24. The mobile device of claim 23, wherein the mobile device is also for using a glyph of a certain character to approximate an angle between a plane of said glyph of the certain character and a plane perpendicular to a line of sight from the camera, and compensating for said angle.

15 25. The mobile device of claim 23, wherein the camera is a video or still camera for capturing arbitrary scenes, and wherein the camera comprises a zoom mechanism for automatically zooming in on the extractable URL to improve the electronic image signal.

20 26. The mobile device of claim 24, wherein the at least one particular set of characters comprises the character string www, and wherein the certain character is the letter "o."

27. The mobile device of claim 23, further comprising a URL extraction means that is
25 responsive to the electronic image signal provided by the camera, the URL extraction means being for finding the at least one particular set of glyphs, for processing the electronic image signal, and for providing a URL request signal to the internet interface;

wherein the internet interface is responsive to the URL request signal, and is
30 for providing the web site signal after communicating with the internet.

28. The mobile device of claim 23, wherein the internet interface is responsive to the electronic image signal, and is for processing the electronic image signal by conveying the electronic image signal to an internet extraction site.

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29. The mobile device of claim 23, wherein the initiation means gives the user an option to make a bookmark for the extractable URL, and wherein the mobile device is for obtaining the web site signal when the bookmark is retrieved.

10 30. The mobile device of claim 23, further comprised of an editing means, for manually amending the extractable URL if the extractable URL is different from the written URL.

15 31. The mobile device of claim 23, further comprising an image selection means, responsive to user input and responsive to the electronic image signal, for providing an image portion signal indicative of a portion of the electronic image where the written URL is depicted; and

wherein the mobile device is for processing the image portion signal to obtain the web site signal from the internet interface.

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32. The mobile device of claim 31, wherein the image selection means includes a zoom function.

25 33. The mobile device of claim 31, wherein the image selection means includes a stylus for selecting the portion of the electronic image where the written URL is depicted.

34. The mobile device of claim 30, wherein the extractable URL is different from the written URL if the web site has not been found using the extractable URL.

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35. A computer-readable medium or media, encoded with a data structure for performing the method of claim 1.

36. A computer-readable medium, for use with a mobile device, encoded with a software data structure comprising:

a URL locator software module, for locating standardized URL glyphs in an electronic image;

a scan and text recognition software module for extracting an extractable URL from the electronic image;

a browser-based user interface module, for allowing the user to decide whether to send the extractable URL to the internet in order to immediately access a web site, or alternatively bookmark the extractable URL.

37. The computer-readable medium of claim 36, wherein the URL locator software module is also for searching an electronic image to find glyphs of at least one particular set of characters.

38. The computer-readable medium of claim 37, wherein the scan and text recognition software module is also for finding a glyph of a certain character after locating the at least one particular set of characters, and for using the glyph of the certain character to approximate an angle between a plane of said glyph of the certain character and a plane perpendicular to a line of sight from the camera, and compensating for said angle before attempting recognition of remaining parts of the extractable URL.

39. The computer-readable medium of claim 36, wherein the software data structure includes code for seeking URL extraction assistance from a user or from another computer if necessary.

40. The computer-readable medium of claim 38 wherein the URL extraction assistance is necessary if the access to the web site has been unsuccessful one or two times.
- 5 41. The computer-readable medium of claim 39 wherein the URL extraction assistance includes the user manually correcting the extractable URL.